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Working More? Working Less? What Do Canadian Workers Prefer?

by Marie Drolet and René Morissette

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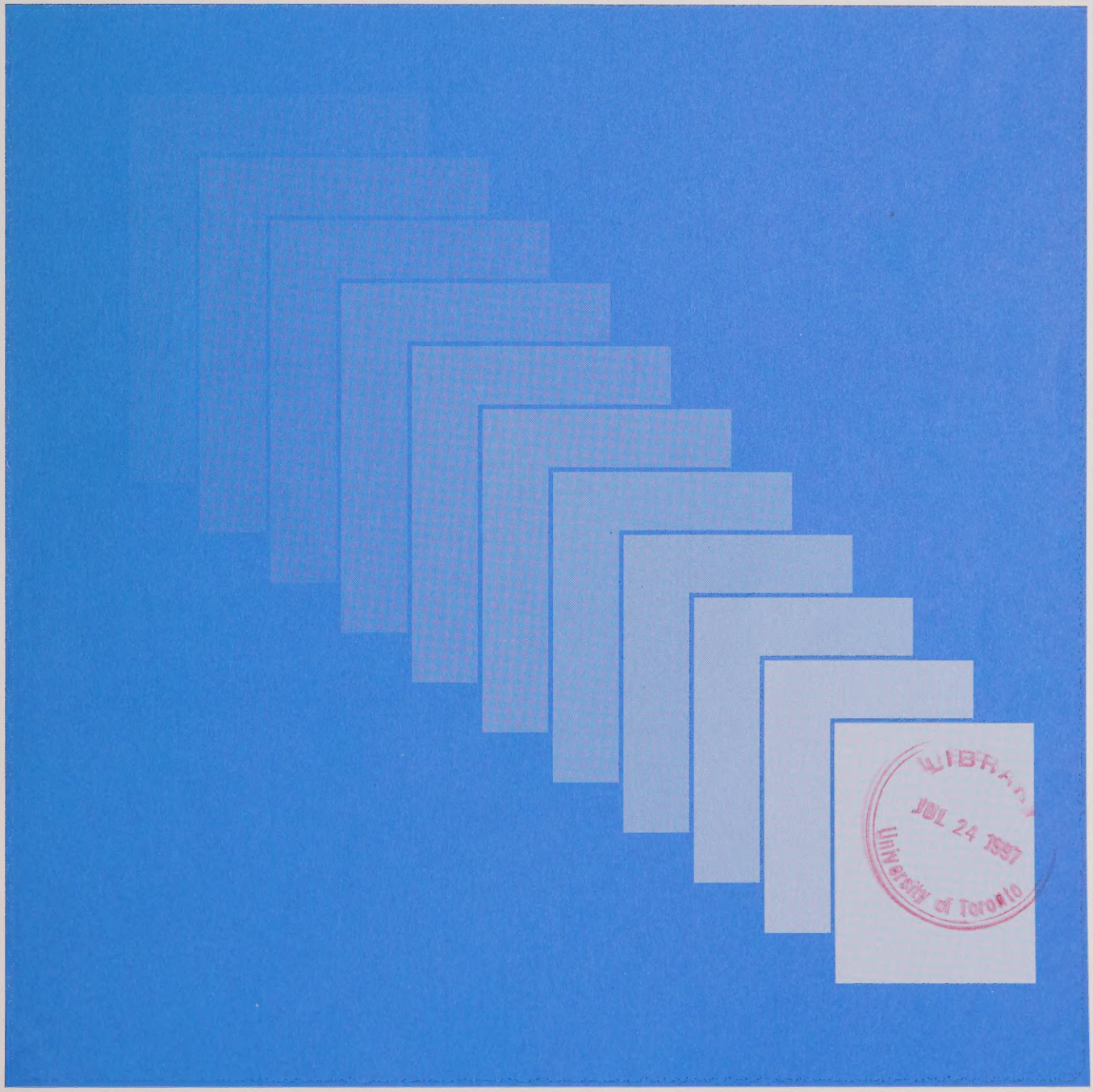

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No. 104

11F0019MPE No.104
ISSN:1200-5223
ISBN: 0-660-16974-6

Price: $5.00 per issue, $25.00 annually

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May 20, 1997

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AZA-4236

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Abstract

Faced with high unemployment rates, an unequal distribution of worktime, and shifts to temporary, part-time and contract employment, Canadian workers may prefer to change their workhours. Using data from the Survey of Work Arrangements of 1995, we find that two thirds of Canadian workers are satisfied with their workhours. The majority of workers who are not satisfied would prefer more hours for more pay rather than fewer hours for less pay. This finding is robust as it holds for each age group, education level, seniority level, industrial and occupational group. Workers most likely to want more workhours are generally young, have low levels of education, have little seniority, hold temporary jobs, work short hours and are employed in low-skill occupations. Workers who are the most likely to desire a shorter workweek are professionals, managers, and natural and social science workers, have high hourly wage rates, possess high levels of education, have long job tenure, occupy permanent jobs and already work long hours.

Calculations based on the Survey on Work Reduction of 1985 suggest that if Canadian workers were to **voluntarily** reduce their workweek, the number of workhours available for redistribution would unlikely be sufficient to both **eliminate** underemployment and reduce unemployment. The potential for worktime redistribution, as measured by the propensity to desire fewer hours, appears to be greatest (lowest) in age-education groups with relatively low (high) unemployment rates. This implies that the resulting decrease in unemployment and underemployment could be more pronounced in groups where workers are already relatively successful.

Keywords: Hours worked, worksharing, unemployment

"It is clear that there are too few jobs. However, the challenge lies not only in the number of jobs but also in their distribution. Redistribution of work could help Canadians balance work and family life, provide greater access to employment for those in need, and enhance opportunities for people to pursue education and skills upgrading. It could also offer an option for people who would, under certain circumstances, prefer to work fewer hours."

- Lloyd Axworthy, Minister of Human Resources Development, 1994

I. Introduction

The number of hours Canadians spend at work continues to be a topical issue in the 1990s for several reasons. First, high unemployment rates typical of recessionary periods have renewed the interest in worktime reductions as a means of increasing overall employment. Second, recent work at Statistics Canada has shown that during the 1980s, the growth of earnings inequality occurred in conjunction with the growth in the dispersion of workhours (Morissette, Myles and Picot, 1994). Specifically, over the last decade, highly paid workers have increased the length of their workweek while low-paid workers have worked fewer hours per week. Hence, changes in the distribution of working time appear to coincide with - if not to cause - changes in earnings inequality.

Third, the decline in the relative importance of the standard workweek and the growth of non-standard forms of employment may influence Canadian workers' attitudes towards worktime. Since the beginning of the eighties, the share of workers employed in jobs involving 35-40 hours per week fell while the proportion of persons working either short or long hours increased (Morissette and Sunter, 1994). If part of the growth in short or long workweeks is involuntary, a growing number of Canadians will be dissatisfied with their workhours.

Fourth, the growing participation of women in the labour force - observed until the mid-nineties- and the increasing prevalence of dual-income families lead more Canadians to attempt to balance the demands of the family and the workplace (Frederick, 1995) and are likely to influence the number of workhours they desire.

These issues may have a significant impact on the preferences of Canadian workers towards worktime. Faced with high unemployment rates, a more unequal distribution of worktime, and shifts to temporary, part-time and contract employment, Canadian workers may prefer to change their work patterns in an attempt to insure themselves against future uncertainties in employment. As well, changing societal expectations with respect to work and the family may lead to differences in preferences towards worktime for different demographic groups.

These questions highlight the need to provide recent evidence on Canadians' preferences towards individual worktime. This is the goal of this paper. Using data from the Survey of Work Arrangements (SWA) of 1995, we wish to document the extent to which Canadian workers, would prefer, **at the same wage rate**, to work fewer hours for less pay, more hours for more pay or the same hours for the same pay in their main job. Previous Canadian studies on worktime preferences (Kahn and Lang, 1991, 1995, 1996; Benimadhu, 1987) have used data from the Survey on Work Reduction of 1985 and some of them (Kahn and Lang, 1995, 1996) have attempted to test competing theories of hours constraints. We do not attempt to do so. Rather, the focus of the article is to examine how, in the mid-nineties, the desire to work fewer or more hours varies across demographic and job related characteristics.

The plan of the paper is the following. In Section II, we present the data used in this study. In Section III, we sketch a profile of workers who want to work shorter or longer hours. The presentation of the results is organized around three subsections: job quality, worker skills and family environment. First, we examine the relationship between worktime preferences and job quality. We attempt to capture the impact of job quality by examining the number of hours usually worked in the main job (which allows us to distinguish full-time and part-time jobs), permanent job status, pension plan coverage, union status and hourly wages. Because these job characteristics vary substantially across firm sizes and across industries, we also briefly examine the impact of these two variables. Second, we analyze how worktime preferences vary with workers' skills, as proxied by education, occupation, age—which proxies general labour market experience—and seniority—which proxies firm-specific human capital. Third, we document how the family environment affects an individual worker's desire to work shorter or longer hours. We examine the impact of family earnings, marital status, spouse's weekly earnings and the presence of preschool aged children on individual preferences towards worktime. As well, we compare workhour preferences of lone-parent mothers to other mothers. Because job and worker characteristics, as well as family environment, are all likely to influence worktime preferences, in Section IV, we turn to multivariate analysis techniques to estimate the probability of wanting fewer/more/same hours. We discuss some implications of our results in Section V. Concluding remarks follow.

II. The Data

The data for this article is drawn from the Survey of Work Arrangements (SWA) conducted by Statistics Canada as a supplement to the Labour Force Survey (LFS) in November 1995. Like the LFS, the SWA collected information on the labour market activities and on the demographic characteristics of the working-age population. The SWA covered additional topics of interest such as the place of work (i.e., home based work, reasons for other than regular daytime schedules); hours of work (i.e., usual and actual hours, unpaid hours, overtime); non-wage benefits; job permanency; union status and multiple job holding. This paper focuses on the preferences of Canadian workers towards worktime. The question related to these preferences is as follows:

"At this job, given the choice, would ..., at his/her current wage rate, prefer to work:
(1) fewer hours for less pay?
(2) more hours for more pay?
(3) the same hours for the same pay?"

The SWA sample consisted of a subsample of the LFS sample.[1] Approximately 27,000 households were selected. The survey sampled all employed, paid workers and self-employed persons aged 15-69. About 42,000 individuals responded to the survey. The SWA data was collected by LFS interviewers using computer assisted telephone interviewing (CATI) techniques. Proxy respondents were allowed.[2]

The sample selected in this paper consists of paid workers aged 15-69 who are not enrolled full-time in school. We exclude individuals who are self-employed, who did not answer the survey question on preferences for worktime, and those who are working part-time because they could only find part-time work yet responded that they want fewer hours for less pay or that they were satisfied with their hours. The resulting sample has 19,143 respondents (9,932 men and 9,211 women).

Previous Canadian studies on hours constraints (Benimadhu, 1987; Kahn and Lang, 1991, 1995, 1996) used data from the 1985 Survey on Work Reduction (SWR). Because of differences in the wording, in the sequence of questions, and in the modes of data collection, comparisons of the preferences towards worktime between the two surveys can be misleading. A detailed discussion is presented in Appendix I.

III. Canadian Workers' Preferences Towards Worktime

In 1995, two thirds of the Canadian workforce were satisfied with their workhours (Table 1). One in three employees wanted to alter the length of their workweek. Of these, far more preferred to work longer rather than shorter hours : 27.1% of Canadian workers desired more hours for more pay while 6.4% preferred fewer hours for less pay. The fact that there are more individuals who prefer longer rather than shorter hours is a robust finding. As we will see below, it holds for each province, each age group, each education level, each industrial and occupational group.

Workers in the Canadian provinces exhibit somewhat different preferences toward worktime. With the exception of Prince-Edward-Island, the tendency to prefer longer hours is the highest in the Atlantic provinces. This may be related to the relatively high unemployment rates observed in these provinces. High unemployment reduces the number of annual hours available to workers and constrains more of them to work fewer hours than they desire. This may increase the percentage of the workforce who would prefer longer hours. However, differences in the provincial unemployment rates do not explain all the variation in workers' preferences towards worktime. In 1995, the unemployment rate in Quebec (11.3%) was higher that in Ontario (8.7%) yet the proportion of workers who would prefer a longer workweek was lower in Quebec than in Ontario.

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[1] The LFS sample consists of the population aged 15 and over residing in Canada, except residents of Yukon and of the Northwest Territories, persons living on Indian reserves, institutional residents and full-time members of the Armed Forces. These exclusions account for roughly 2% of the population.

[2] The modes of data collection may have an impact on the data. First, allowing proxy respondents may be problematic when asking about the preferences of another member of the household: the proxy respondent may not know the true preferences of the individual. Fortunately, the SWA data set distinguishes answers obtained from proxy respondents and direct respondents. This allows us to take account of the potential differences between proxy and non-proxy respondents.

III.1 Job Characteristics and Workers' Preferences

Recent years have witnessed a growing concern about the capacity of the Canadian economy to create permanent high-paying jobs (e.g., Economic Council, 1990). A popular perception is that the distribution of employment is shifting away from manufacturing - which is the case - and towards a service sector polarized among a set of high wage "knowledge" jobs on one hand and a low wage personal service jobs on the other.[3] Another popular belief is that increases in fixed costs of hiring may have made firms more reluctant to hire new workers (Business Week, 1993). The media often present case studies of people who recently started new jobs which are part-time, not permanent and offer little or no fringe benefits.[4] Given this interest about the type of jobs Canadians hold, it is worth documenting how their worktime preferences vary across specific job attributes.

Table 2 shows that the number of weekly hours usually worked in the main job is highly correlated with individuals' preferences towards worktime. The majority of men and women employed part-time (i.e., less than 30 hours per week) would prefer to work more while virtually none of them would rather work less. Conversely, of all men and women working at least 50 hours per week, 13% to 15% would prefer longer hours while 11% of men and 23% of women would opt for shorter workweeks. Interestingly, of all men and women working 35 to 40 hours per week, roughly 70% are satisfied with their workhours.

One explanation of the impact of the usual number of workhours on the preferences towards worktime is a reversion-to-the-mean interpretation. If labour supply is inelastic (i.e., desired hours, h_i^*, are constant across wage rates) groups of workers who exhibit the greatest propensity to desire more (fewer) hours would simply be those for which observed hours, h_i, are relatively low (high). Whether desired hours are constant across wage rates or not, observed hours will **by definition**, be correlated with the desire to work additional hours. This is because additional hours desired by workers equal desired hours minus observed hours (i.e., $a_i = h_i^* - h_i$). Hence, observed hours will be negatively correlated with the desire to work more hours.[5] A corollary of this is that factors affecting the desire to work more/fewer hours will be those which influence desired hours h_i^* and/or observed hours h_i.

Hourly wage rates are one of these factors: low-paid workers are more likely to prefer longer hours than highly paid employees. For example, roughly half of men paid less than $10 per hour

[3] This argument, i.e., the de-industrialization hypothesis, has been put forward by Bluestone and Harrison (1982) to explain the growth of earnings inequality in the United States. Recent studies (e.g. Katz and Murphy, 1992 for the U.S.; Morissette, 1995 for Canada) have shown that most of the growth of earnings inequality occurred within industries and thus, that de-industrialization is not a dominant factor.

[4] Using longitudinal data from the Labour Market Activity Survey of 1988-1990, Morissette (1993) shows that men aged 45-54 who started a new full-time job in 1989-1990 were less likely to be covered by a pension plan than their counterparts aged 35-44.

[5] Desired hours h_i^* are not observed in our data set. To clarify this point, assume that h_i^* are observed and that the dependent variable considered is additional hours desired a_i , i.e., $a_i = h_i^* - h_i$. If one were to regress this dependent variable on observed hours h_i, one would, by construction, find a negative correlation between h_i and a_i. The fact that we do not observe h_i^* and that, instead, we have an ordered qualitative variable which takes three values (i.e., more, fewer, same hours) does not alter this argument.

prefer longer hours. In contrast, only 13% of those receiving $25 or more per hour would opt for more worktime. Conversely, the desire to work fewer hours rises with wage rates. Two factors may explain this finding. First, other things being equal, highly paid workers are more likely to have high annual income than other workers and consequently may be able to reduce somewhat their workhours without substantially affecting their standard of living. Second, highly paid employees generally have relatively long workweeks. As pointed out by Kahn and Lang (1991, 611), "a positively sloped relation between actual hours and wages may not indicate labor supply responses, but rather that employers require low wage workers to work fewer hours than desired while allowing high wage workers to work additional hours".

Other job aspects are likely to matter. For instance, non-unionized men are more likely to prefer increased hours than unionized men even though they do not work, on average, shorter weekly hours (41.3 vs. 39.8). Roughly half of workers holding non-permanent jobs desire longer hours, compared to only 25% for those in permanent jobs.[6] More than one-third of men and women not covered by a pension plan would rather work more compared to at most one fifth of those who are covered.[7]

Many factors may explain why workers in non-permanent jobs are more likely to desire an increase in their workhours than workers who hold permanent positions. One explanation is that individuals in non-permanent jobs face more uncertainty as to their future income stream than others. Second, non-permanent jobs provide very few, if any, fringe benefits.[8] As a result of both factors, workers in these jobs may be willing to work longer hours to offset the lack of job security they are facing. The demographic profile of employees who hold non-permanent jobs may also explain part of the desire for increased workhours. Non-permanent jobs are disproportionately held by young workers: workers aged 24 or less account for 11% of the labour force yet they hold 19% of non-permanent jobs. Non-permanent jobs generally have lower hourly wage rates: about one in five male workers in non-permanent jobs compared to one in ten male workers in permanent jobs report hourly wage rates of less than $10. As will be shown below, young workers have a greater propensity to desire longer hours than other workers.

Why are workers not covered by a pension plan more willing to increase their hours than those who are covered ? One argument relies on the idea that pension plan coverage can be viewed as a deferred compensation or forced savings scheme. Workers who are not offered a pension plan are solely responsible for financing their retirement and as a result, may want to work more hours for more pay. Second, pension plan coverage is lower in occupations requiring less skills than in occupations requiring more specialized skills. Occupations not offering pension plan coverage are generally poorly paid, tend to have shorter workweeks which may induce workers to prefer increased hours. Third, pension plan coverage is lower in small firms than in large firms (Morissette, 1991). Since smaller firms pay lower wages, workers may prefer to increase the length of their workweek to increase their earnings. The fact that the percentage of employees who prefer to work more hours is higher in firms with less than 20 workers (34% and 30% for

[6] One in nine Canadian workers holds a non-permanent job. In the Survey of Work Arrangements of 1995, non-permanent jobs refer to seasonal, temporary, contract, term, casual jobs and work done through a temporary help agency.

[7] Roughly half of Canadian paid workers are employed in a job that offers a pension plan.

[8] About 58% of permanent jobs and 24% of non-permanent jobs are covered by pension plans.

men and women, respectively) than in firms with at least 500 workers (23% and 24%) is consistent with that view.

The above discussion may help understand some inter-industry differences in the desire to work increased hours. Jobs in consumer services often are low-paid, part-time, non-permanent, offer no pension coverage and are found in small firms. At the other end of the spectrum, jobs in public services are much more likely to be well-paid, full-time, permanent and to offer relatively generous fringe benefits. It is not then surprising to find that about 40% of men and women employed in consumer services would prefer to work more compared to at most 24% for public service employees.

Combined, these results suggest that paid workers involved in non-standard forms of employment (e.g., holding part-time jobs, temporary jobs or jobs offering little fringe benefits) are much more likely to desire increased hours than other workers. Because the type of jobs one worker has potentially access to depends - at least partly - on this worker's human capital, we now examine how worktime preferences and workers' skills are interrelated.

III.2 Worker Skills and Worktime Preferences

We attempt to capture the impact of workers' skills by examining age, as a proxy for general labour market experience, seniority as a proxy for firm-specific human capital, education and occupation.

For each age group, level of seniority, level of education and occupation, the majority of workers who are not satisfied with their workhours would prefer longer rather than shorter hours (Table 3).[9] This confirms our previous findings (in Table 1 and 2) that the greater desire for longer hours is widespread and is not confined to particular sectors of the economy.

The propensity to desire increased workhours varies drastically across age groups and levels of seniority and to a lesser extent across education levels and occupations. Older workers with long job tenure are less likely to desire more worktime than young employees recently hired. For instance, of all workers aged 15-24, roughly half report wanting more hours for more pay. A similar percentage is observed for workers with 1 to 6 months of seniority. In contrast, only 14% to 19% of workers aged 45-54 or of workers with 11-20 years of seniority express a desire for longer hours.

Older workers with high seniority are also more likely to be satisfied with their workhours than other employees. In fact, for both men and women, the percentage of employees who report wanting the same hours for the same pay rises monotonically with age and time spent with the employer. This suggests that some form of matching occurs between firms and workers. Workers will choose to remain in a job for a long period of time when the wage-hours package offered by the firm satisfies their preferences. In contrast, young employees may "job shop" until they find a job that matches their knowledge and worktime preferences with the skills and hours requirement of the employer.

[9] The only exception is women with over 20 years of seniority.

Several factors may explain the diverging preferences towards worktime of different age groups. First, many young workers have low hourly wage rates[10] and thus may be willing to work longer hours to improve their current standard of living or to accumulate savings. Second, roughly three quarters of young workers are employed in positions which do not offer pension plans and as a result, may want to increase their workhours to save for retirement. Third, young workers are overrepresented in non-permanent jobs (Table 4). As we argued above, workers in non-permanent positions may desire longer workhours in their present jobs to compensate for the uncertainty associated with their future earnings. Fourth, young workers are much more likely to be involuntarily employed part-time than older workers and thus much more likely to work fewer hours than they desire (Table 4). Fifth, because they are more at risk of being laid-off (Picot and Pyper, 1993) and consequently face greater job insecurity than older workers, young workers may be more inclined to prefer increased worktime.

Because age and job tenure are positively correlated, many of the aforementioned factors may play a role in explaining why new employees prefer increased hours more often than those with longer tenure. One argument could be that, either because of the firm-specific human capital they have accumulated or because wage determination is based on seniority rules, many employees with high tenure are highly paid and may not need or want to increase their workhours. Another possibility is that many workers with low seniority may be employed in occupations (e.g. clerical and services-related occupations) which are characterized by relatively short workweeks. This may result in a greater willingness to work longer hours. Alternately, new employees may desire longer workhours to act as a signal of their long-term employment commitment to the firm.

University graduates, professionals, managers and individuals employed in natural and social sciences prefer fewer hours more often than other paid workers: given the choice, about 10% would opt for shorter hours. This may be attributable to the fact that these highly skilled workers generally receive high wages which may translate to relatively high family earnings. Once again, they may have greater scope to reduce their workhours without substantially affecting their standard of living.[11] The fact that they have relatively long workweeks may also explain their desire to reduce their worktime in an attempt to balance work, social and family responsibilities. Given the growing importance of dual-earner couples, attempting to balance the demands of the family and the workplace is likely to become a high-priority issue for many Canadians.

[10] Roughly 45% of men aged 15 - 24 compared to only 6% of men aged 45 - 54 years earn less that $10 per hour.

[11] In 1995, about 40% of university graduates compared to about 10% of workers with a high school education earned over $20 per hour. Over one in three university graduates had family incomes over $70,000 in 1995.

III.3 Family Environment and Worktime Preferences

The family environment is an important component of an individual worker's preferences towards worktime. In Table 5, we attempt to capture the impact of family environment by examining family earnings, marital status, spouse's weekly earnings and the presence of preschool aged children.

Family earnings[12] is a key factor in explaining why Canadians want to shorten or increase their workhours.[13] As family earnings increase, the inclination towards more worktime diminishes and consequently, the propensity to want fewer workhours increases. Part of the variation in the preferences towards worktime is due to the different demographic characteristics of workers found at the highest and the lowest end of the earnings distribution. Those workers with low family earnings are usually young, have low seniority, have low levels of education and work in low-paying occupations.[14] Conversely, workers with high family earnings are usually older, are highly educated, work in professional, managerial and natural and social science occupations and have high levels of seniority.[15]

Marital status influences family earnings and consequently worker preferences. Single, never married persons have a greater inclination towards increased worktime than persons who are married or living common-law since on average, they have lower family earnings. There is also an age effect that may contribute to the propensity of single, never married individuals to desire longer workhours. These individuals are generally younger and for reasons cited earlier, may desire more worktime.

The worktime preferences of married and common-law persons vary according to the labour force activity of the spouse as well as to the spouse's weekly wage. For families with both spouses participating in the labour force, the tendency to desire increased workhours declines as the spouse's weekly wage increases. For other families, the inclination towards more worktime depends on the decision to participate in the workforce: men with an unemployed spouse are more likely to want more worktime than those whose spouse is out of the labour force. This divergence in worktime preferences can be explained by the fact that unemployment is a labour

[12] Family earnings is defined as the sum of wages and salaries for all paid workers in the household.

[13] A caveat of the SWA data is that it does not contain a variable on family wealth. The family financial situation and an individual's **access** to the family's finances is an influential component in the preferences towards worktime. Suppose worker A and worker B are identical except worker A has a large amount of wealth. When questioned on preferences towards worktime, these workers may reveal very different preferences. Worker A reveals that she would prefer fewer workhours and uses part of her wealth to supplement her income in order to sustain a given lifestyle. However, in order to maintain the same lifestyle as worker A, worker B reveals his preference for longer workhours. In this case, the preferences towards worktime are affected by the unobserved variable, wealth.

[14] Of workers in families earning less than $20,000, 26.0% are young workers, just over half report their highest level of educational attainment is high school or less, 61.9% are employed in clerical, sales or service occupations and 40.8% have been on the job for one year or less.

[15] Of workers in families earning more than $70,000, 36.0% have university degrees, 56.3% are employed in professional, managerial and natural and social science occupations and 41.5% have over 10 years of job experience.

market constraint imposed on an individual or family whereas the decision not to participate in the labour force can be viewed as a voluntary choice made by the individual or family.[16]

The most important determinant of a woman's decision to participate in the labour force and of the number of hours she works is the presence of young children. (Nakamura and Nakamura, 1985, p.78) Consequently, the presence of preschool aged children influences the preferences of women towards worktime. For instance, women with two young children are more inclined to desire shorter hours than women who do not have young children. Because they devote more time to unpaid work, they also work much shorter hours in the labour market.

The presence of young children does not have the same impact on men's preferences towards worktime. First, in families with preschool aged children, women prefer a reduction in worktime more often than men. Second, women with young kids work, on average, significantly fewer hours than their male counterparts. Third, while women work fewer hours as they have more young children, men work more hours. Although the past two decades have witnessed meaningful changes in the role and attitude towards women in the workplace, the fact that women's preferences towards worktime are significantly influenced by the presence of young children coupled with their lower number of paid workhours suggests that the traditional dichotomy between male 'breadwinners' and female 'nurturers' still remains a dominant characteristic of today's families.[17]

Recent years have witnessed the decline of the 'traditional' family structure and the rise of alternative family arrangements: lone parent families increased as a proportion of all families with children from 16.6% in 1981 to 21.6% in 1995.[18] The majority of these families are headed by women.[19] The proportion of lone parent mothers with incomes below Statistic Canada's Low Income Cutoff is the highest of all Canadian families.[20]

Lone parent mothers with preschool aged children are more willing to work longer hours than other mothers.[21] Their attempt to escape poverty may partly explain their greater inclination

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[16] The Survey of Work Arrangements does not allow us to distinguish persons not participating in the labour force from discouraged workers. The aforementioned argument assumes that persons not participating in the labour force have made a voluntary decision.

[17] The 1994 General Social Survey finds that children had a greater impact on the lives of women than on the lives of men. 'The data (GSS) highlight the radical adjustments made by women with the advent of children and confirm earlier research, which "point to childbirth rather than marriage as the factor that produces the greatest change in a woman's life and work." (Armstrong & Armstrong, 1989). [Men] continued to spend virtually the same amount of time pursuing paid work, which may have limited their ability to supplement unpaid work.' (Frederick, 1995, p. 22).

[18] Canadian Families: Diversity and Change, Statistics Canada, 12F0061XPE.

[19] In 1991, women represented 82% of all lone parents (Lindsay 1992, p. 9).

[20] In 1990, 61% of lone parent families headed by females reported incomes below the Statistics Canada Low Income Cutoff measure (Lindsay 1992, p. 35).

[21] Referring to Table 5, we see that 38.8% of lone-parent mothers (living alone with one preschool aged child) and 23.6% of married and common-law mothers (not living on their own with one preschool aged child) wants more worktime.

towards longer workhours. Blank (1996) explains that these attempts may be thwarted by three additional constraints. First, the potential family earnings of a lone parent household is limited since there is only one adult available to pursue labour market activities. Second, the fact that the one adult participating in the labour force is female typically means that her earnings potential is well below that of equivalent skilled men. Third, since there is no other adult available to provide child care, a significant portion of earnings will go to pay for child care, which does little to improve the overall resources available to the family from work.

Regarding the issue of child care, Cleveland, Gunderson and Hyatt (1996) show that the costs of child care have a significant negative impact on the labour supply decisions of women with children. The availability and financial burden of child care arrangements is an important issue that may influence the worktime preferences of women and especially of lone parent mothers. If additional workhours require additional daycare costs, lone parent mothers may be unwilling to work longer workhours. If daycare costs remained fixed (i.e., lump sum daycare payment regardless of the number of hours of care), some lone parent mothers may prefer longer workhours in an attempt to balance the demands of the family and the workplace.

IV. Multivariate Analysis

Clearly, job attributes, worker characteristics and the family environment are all expected to have an effect on Canadians' worktime preferences. In order to capture the contribution of the factors considered in the previous section, we now turn to a multivariate analysis of the probability of desiring fewer/same/more hours.

Assume that workers report wanting fewer (more) hours if the difference between their desired hours h_i^* and observed hours h_i is below (above) a certain threshold s0 (s1), otherwise they report being satisfied with their workhours, i.e., assume that:

(1.1) $I_i = 0$ (fewer) if $h_i^* - h_i = b_0 + b_1 * wage_i + b_2 * x_i + b_3 * f_i + e_i < s0$
(1.2) $I_i = 1$ (same) if $s0 \leq b_0 + b_1 * wage_i + b_2 * x_i + b_3 * f_i + e_i < s1$
(1.3) $I_i = 2$ (more) if $h_i^* - h_i = b_0 + b_1 * wage_i + b_2 * x_i + b_3 * f_i + e_i \geq s1$
; $s1 > s0$

where I_i is an indicator variable corresponding to the answers given by respondents
$wage_i$ denote worker i's hourly wage
x_i is a vector of personal characteristics
f_i is a vector of firm characteristics
e_i is a random term following a logistic distribution
s0, s1 are hours thresholds.[22] [23]

Desired hours h_i^* are based on a standard labour supply function :
(2) $h_i^* = g1(wage_i, x_i)$

[22] For a formal derivation of an ordered probit model of hours constraints, see Kahn and Lang (1992).

[23] The parameters b_0, s0 and s1 cannot be estimated separately. The model will estimate $c0 = b_0 - s0$ and $c1 = b_0 - s1$. The assumption $s1 > s0$ implies that c1 should be smaller than c0.

while observed hours h_i are assumed to depend both on firm characteristics f_i and worker attributes x_i :

(3) $h_i = g2(f_i, x_i)$

Hence the difference between desired and observed hours can be written as follows :

(4) $h_i^* - h_i = g3(wage_i, x_i, f_i)$

Equation (4) forms the basis of the ordered logit model defined by the system of equations 1.1-1.3.

In the set of personal characteristics, (x_i) we include age, education, tenure, occupation, region, marital status, family size and the number of preschool aged children. In a model of family labour supply (e.g., Ashenfelter and Heckman, 1974), h_i^* will also depend on the spouse's wage rate. To take this into account, we also include the weekly pay of the worker's spouse.[24] In the set of firm characteristics, f_i, we include firm size and industry since these are the only firm variables available in the survey. Other regressors include union status, pension plan coverage and the permanent/non-permanent status of a job.

Because our dependent variable is, by definition, desired hours h_i^* minus observed hours h_i, we exclude the latter from the set of regressors. We also exclude family earnings because of endogeneity issues. The positive correlation between family earnings and the desire to work fewer hours may be explained in two different ways. First, individuals may prefer shorter hours because they have high family earnings. Alternatively, individuals may have high family earnings because they work long hours and thus are more likely to prefer shorter workweeks.

We estimate the aforementioned model separately for men and women. Because the distinction between proxy respondents and direct respondents is crucial for any question about individuals' preferences—such as the question examined in this paper—we also re-estimate the model for male and female direct respondents. Essentially, the same qualitative conclusions emerge both for direct respondents and for the full sample. Minor differences arise between the two sets of results and these will be noted below.[25]

To assess the contribution of a given explanatory variable, we calculate the probability of desiring fewer/same/more hours conditional on the mean values of the **other** explanatory variables.[26] For example, to examine the impact of age on workers' preferences, we calculate, for various age groups, the probability of wanting fewer/same/more hours conditional on the mean values of hourly wages and of the dummy variables which represent education, occupation, industry, etc.

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[24] The spouse's hourly wage rate is not available on the SWA file.

[25] In our sample, 21.8% of women and 58.2% of men are proxy respondents.

[26] Coefficients of regressors which are not statistically significant at the 5% level are set to zero for these calculations.

The resulting probabilities are presented in Tables 6, 7 and 8 for the full sample. Several points are worth noting. First, for both men and women, hourly wages, seniority, age, occupation and whether or not a job is permanent remain major determinants of worktime preferences. Other things being equal, men (women) earning less than $7.50 per hour are two (two and a half) times more likely to desire longer hours than those receiving more than $25.00 per hour. Employees who have been in their job for less than 6 months are twice as likely to desire longer hours than those with over 20 years of seniority. The probability of men aged 15-24 desiring longer hours (28%) exceeds by far that of men aged 55 or more (18%). About 30% of employees in services-related occupations prefer longer hours, compared to only 20% for professionals and managers. Individuals holding temporary jobs are much more willing to increase their workhours than those employed in permanent positions.

Second, as Table 3 showed, the probability of wanting more hours does not rise monotonically with education. For both genders, employees with some post-secondary education prefer longer hours more often than those with only elementary schooling.[27] Yet, of all individuals, university graduates are still the least likely to desire increased hours.

Third, once we control for other factors, differences in worktime preferences across union status vanish while inter-industry differences become much less pronounced.[28] For instance, worktime preferences no longer differ between public services and consumer services. This suggests that the substantial difference reported between these two sectors in Table 2 is related to differences in wages, age and seniority of the workforce and in the percentage of permanent jobs between the two sectors. Similarly, the effect of pension plan coverage becomes much more modest than Table 2 previously suggested.

Fourth, among individuals who are married or living common-law, the tendency to desire longer hours falls as the spouse's weekly pay increases (Table 8). This confirms the findings of Table 5. As noted earlier, the probability of a man desiring longer hours is much higher if his wife is unemployed (34%) than if she is out of the labour force (26%). This suggests that workers' labour supply decisions are best viewed in the context of the family than at the individual level.

Fifth, lone-parent mothers are still more likely to prefer longer hours than mothers who are married or living common-law. For instance, the probability of mothers with one preschool child wanting more hours is 24% for lone-parents compared to 16% for married/common-law

[27] At least for men, this could be related to the fact that the former work on average relatively few hours (39.7) compared to the latter (40.9).

[28] Furthermore, the propensity to desire more hours, which was higher in small firms than in large firms (in the unadjusted data) now becomes slightly lower in small firms.

mothers.[29] Finally, an increase in family size increases women's desire for more work but has no effect on men's preferences.[30]

When we re-estimate the model for direct respondents, the only points worth noting are the following: 1) more important inter-industry differences remain for men, 2) the effect of pension coverage is no longer significant for men and 3) men's desire for longer hours still declines with their spouse's weekly pay but no longer monotonically.

V. Implications of the Results

The persistently high unemployment rates following the 1990-92 recession have revived the interest in worktime redistribution as a means of increasing overall employment. The main finding of this paper is that, in all age groups, in all education levels, in all occupations and in all industries, there are more Canadians who, given the choice, would prefer to work longer hours for more pay than work fewer hours for less pay. In the aggregate, for each Canadian who would choose to reduce his/her workhours, there are four Canadians who would like to work more hours.

The Survey of Work Arrangements does not contain information on either the number of additional hours that underemployed workers (i.e.,, employees who would like to work more) would be inclined to work or the number of hours by which over-employed workers (i.e., employees who would like to work less) would be willing to reduce their workweek. As a result, any attempt to estimate how many workhours could be redistributed on a voluntary basis must rest on specific assumptions regarding the extent to which Canadians are ready to alter the length of their workweek.

The only evidence on the desired number of workhours comes from the 1985 Survey on Work Reduction. Calculations for a sample of paid workers aged 18-69 and not enrolled in school full-time show that in 1985, Canadians who preferred to work longer hours for more pay would have been willing to increase their workweek by 12.7 hours while those who preferred to work fewer hours for less pay would reduce their workweek by 3.8 hours. This evidence suggests that the number of hours which Canadians would accept to reduce their workweek is smaller than the number of additional hours other Canadians would be prepared to work.

Together, these points suggest that if Canadians were to **voluntarily** reduce their workweek and if these hours were redistributed to individuals who are currently employed for less hours than desired, the number of available workhours for redistribution would be smaller than the number of additional hours desired by underemployed Canadians. In other words, the number of workhours generated by a voluntary worktime reduction would be insufficient to eliminate the underemployment of those Canadians currently employed. Under this scenario, the entire

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[29] To calculate the probability of a lone-parent mother with one preschool aged child desiring more worktime, we set the dummy variables for spouse weekly pay categories to zero (since single, separated, divorced and widowed is the base category) and set the living on own with one preschool aged child dummy variable to one. To calculate the probability of a married/common-law mother with one preschool aged child desiring more hours, we set the dummy variable for the spouse's weekly pay of $500 to $750 to one and set the not living on own with one preschool aged child dummy variable to one.

[30] As noted earlier, the preferences towards worktime are different between men and women. The results of the ordered logit show that the number of preschool aged children, marital status and family size does not have a significant impact on the preferences of male workers. For women, family size has a limited impact on their preferences towards worktime.

redistribution of working time would take place between employed individuals, the level of underemployment would fall and the unemployment rate would remain unchanged.

One can imagine an alternative redistribution scheme where part of the workhours would be allocated between existing employees and unemployed individuals. Under such circumstances, the level of underemployment would decrease (but less than under the first scenario), while the unemployment rate would only moderately decrease. In any event, a voluntary worktime reduction is unlikely to generate a sufficient number of workhours to **eliminate** underemployment while at the same time reducing unemployment.

Another important finding of this paper is that Canadian workers who prefer fewer hours have different skills than those who desire longer hours. Canadian workers desiring a shorter workweek are professionals, managers or employees in natural and social sciences occupations (i.e., architects, engineers, teachers, doctors, nurses etc.), who already work long hours, are well educated, have high hourly wage rates, long seniority and are employed in permanent jobs and jobs covered by pension plans. Canadian workers who want more workhours are young, have little seniority, have low levels of education, are employed in sales, services or clerical occupations, in temporary jobs and in jobs not covered by pension plans. Because their skills differ substantially, it is unlikely that worktime could be redistributed between these two types of workers. Worktime redistribution is more likely to be feasible within occupations, with workers desiring fewer workhours being replaced by workers with similar qualifications (i.e., education, experience).

The potential for worktime redistribution, as measured by the propensity to desire fewer hours, appears to be the greatest (lowest) in age-education groups with relatively low (high) unemployment rates (Charts 1 and 2).[31] Older, well-educated workers have relatively low unemployment rates and exhibit the greatest propensity to desire shorter hours. Conversely, young workers with low levels of education face high unemployment rates yet rarely prefer fewer hours. This pattern implies that if worktime redistribution were to take place on a voluntary basis within age-education groups, the resulting decrease in unemployment and underemployment would be more pronounced in groups where workers are already relatively successful.[32]

[31] The data points in Charts 1 and 2 represent the proportion of workers in a particular age-education group desiring fewer hours, by their unemployment rate. There are 25 age-education cells, based on 5 education levels and 5 age groups.

[32] This assumes that the tasks and responsibilities are equally divisible in all age-education groups.

Chart 1: Correlation between unemployment rates and the desire for fewer workhours for male workers aged 15 - 69, 1995

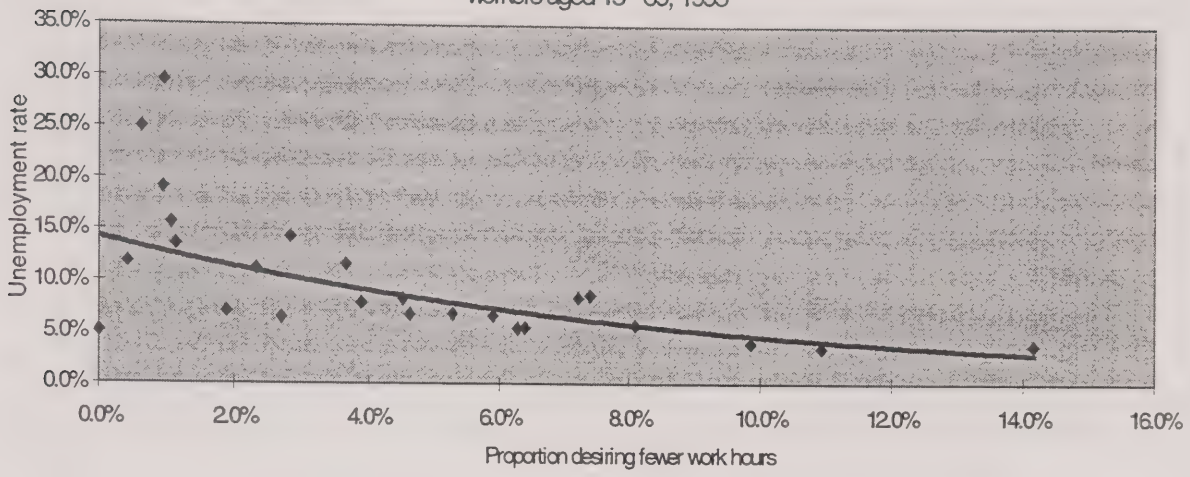
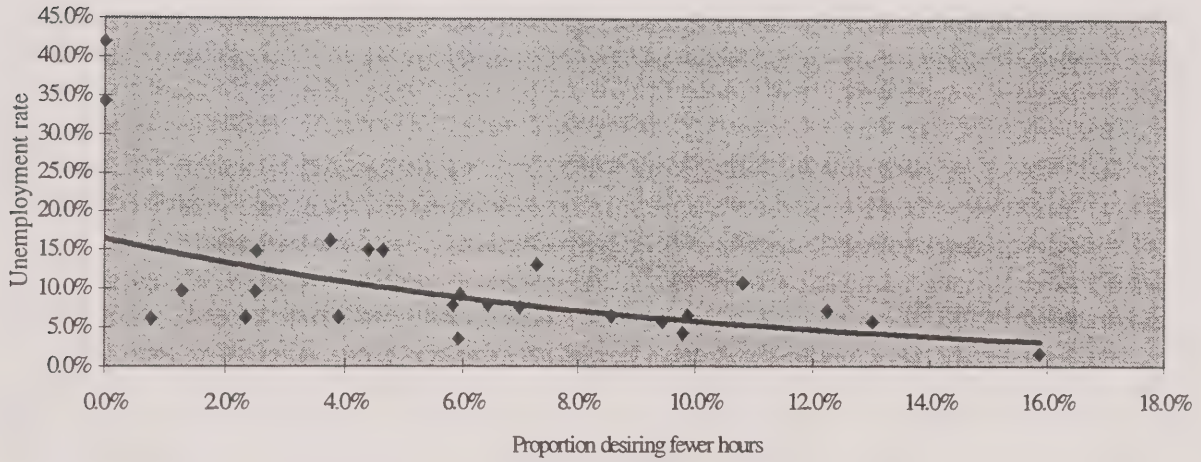


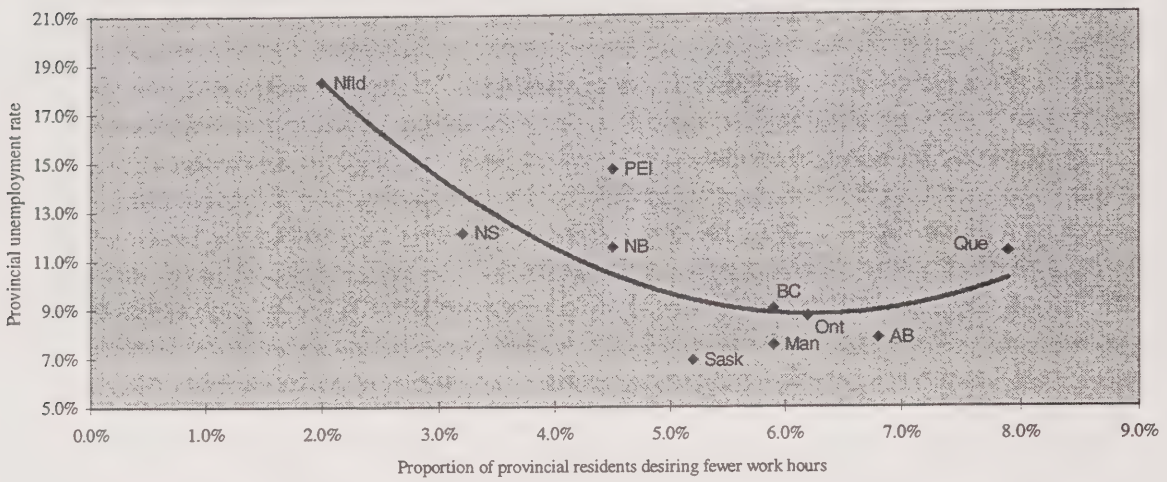
Chart 2: Correlation between unemployment rates and the desire for fewer workhours for female workers, aged 15 - 69, 1995



A similar argument can be made with respect to interprovincial differences in the propensity to prefer reduced worktime. Provinces where a relatively large share of workers desire fewer hours generally have relatively low unemployment (e.g., Ontario and Alberta) (Chart 3).[33] This imposes additional constraints on worktime redistribution as a means of decreasing unemployment since the interprovincial mobility of workers is not perfect.

[33] Weighted Pearson correlation coefficients can be used to measure the strength of the linear relationship between provincial unemployment rates and the propensity to desire fewer workhours. In our sample, this coefficient is negative - that is, as the unemployment rate increases, the tendency to desire fewer workhours declines - but is not statistically significant at the 5% level of significance. When Quebec is excluded from the calculation, the weighted Pearson correlation coefficient remains negative and becomes statistically significant at the 5% level of significance.

Chart 3: Correlation between provincial unemployment rates and the proportion of its residents desiring fewer workhours, all workers, aged 15 - 69, 1995



All the points made in this section assume that, given the choice, Canadian workers would, in reality, behave as they said they would when they responded to the survey. Whether or not this would be the case is unclear. Moreover, all previous arguments have been based on a pure accounting exercise. They neglect the potential productivity gains which could, in certain firms, result from shorter workweeks.[34] They also neglect employers' preferences towards worktime: because of potential increases in training, monitoring and hiring costs, some Canadian firms may not be willing to implement the changes their employees would like them to undertake.[35]

While the question we examined in this paper states explicitly that the wage rate is constant, other constraints probably underlie the choices made by respondents. First, if workers perceive that a reduction in workhours entails a proportionate decrease in non-wage benefits, fewer workers may opt for shorter hours compared to those workers who assume that non-wage benefits remain unchanged. Second, some lone-parent mothers may assume that daycare options remain constant. If this assumption is modified, their preferences may vary. Similarly, worktime preferences of older employees are probably influenced by their expected income during years of retirement and thus by the availability and/or generosity of transfers received through Canada's/Quebec's pension plan.

Workers' preferences are also likely to be affected by labour market conditions. One would expect the propensity to desire more (fewer) hours to increase (decrease) in periods of slack labour market. This could be so for two reasons. First, during recessions, the fraction of the workforce involuntary employed part-time rises and as a result more employees work fewer hours than they desire. Second, some employees who work more hours than they desire may be less

[34] To our knowledge, Lanoie, Raymond and Shearer (1996) is the only recent Canadian study which examines the impact of worksharing on productivity. They study one large firm in the telecommunication industry and find that worksharing has led to a decrease in labour productivity of that firm.

[35] The question we examined in this paper assumes a constant hourly wage rate but is not explicit as to whether non-wage benefits (e.g., pension plan, health care and dental care plan) would be decreased proportionately if workhours were to be reduced. If not, reduction in workhours could increase unit costs of labour by increasing average fixed costs per hour worked.

inclined to report wanting shorter hours if they feel that a reduction in the length of their workweek could threaten their job security. More generally, it seems reasonable to argue that preferences about working time are conditional on a number of economic as well as non-economic constraints and that changes in some of these constraints could have an important effect on these preferences.

VI. Conclusions

Worktime arrangements with fixed hours offer workers very little autonomy regarding their number of paid workhours. Rigidity in the number of workhours may be partially explained by the need for hours coordination among workers and firms, by efficiencies in negotiations with all employees simultaneously, by contractual arrangements and by the significant costs associated with hiring, set-up, training and monitoring. Recent technological innovations in work arrangements (e.g., telework) and flexible work weeks (e.g., compressed time) attempt to address working Canadians' time constraints yet they operate within a framework of rigid total hours.

This paper attempts to establish a profile of Canadian workers who would like to change their workhours. Differences in preferences towards worktime depend on observed and unobserved individual and job characteristics. Most Canadians who would like a change in their workweek would prefer to work longer rather than shorter hours. Workers who want a shorter workweek are professionals, managers and natural and social science workers, have high earnings, have high levels of education, have long job tenure, are employed in permanent jobs and already work longer hours. These individuals can generally afford a reduction of working time without jeopardizing their standard of living. Married women who must take care of their young children would also prefer shorter workhours. On the other hand, lone-parent mothers living on their own are willing to work more hours even though their workweek is already relatively long. Many of these women face severe financial constraints which may partially explain their desire for increased worktime. Young workers with little seniority employed in low-skilled occupations and holding temporary jobs seem to encounter the most severe hours constraints in the Canadian labour market.

Tables

Table 1: Preferences towards worktime

Characteristics	Proportion of working population desiring		
	fewer hours	same hours	more hours
	%	%	%
Canada	6.4	66.6	27.1
Sex			
Men	5.3	67.5	27.2
Women	7.6	65.5	26.9
Province			
Newfoundland	2.0	66.7	31.4
Prince Edward Island	4.5	72.8	22.7
Nova Scotia	3.2	65.0	31.9
New Brunswick	4.5	64.7	30.7
Quebec	7.9	69.4	22.8
Ontario	6.2	65.2	28.6
Manitoba	5.9	65.6	28.4
Saskatchewan	5.2	67.5	27.3
Alberta	6.8	63.5	29.7
British Columbia	5.9	68.4	25.7

Source: Survey of Work Arrangements, 1995

Table 2: Preferences towards worktime and job characteristics

Job characteristics	Men				Women			
	Proportion desiring			Usual	Proportion desiring			Usual
	fewer	same	more	hours	fewer	same	more	hours
Total	5.3%	67.5%	27.2%	40.8	7.6%	65.5%	26.9%	34.2
Usual hours in main job								
0 - 19 hours	0.0%	19.0%	81.0%	11.2	1.2%	42.1%	56.7%	12.4
20 - 29 hours	0.0%	22.8%	77.2%	22.5	1.6%	47.5%	51.0%	23.1
30 - 34 hours	4.4%	37.3%	58.2%	30.9	4.8%	55.8%	39.4%	31.0
35 - 40 hours	4.8%	69.8%	25.4%	39.3	9.1%	73.6%	17.4%	38.3
41 - 49 hours	4.0%	72.8%	23.3%	44.5	10.0%	77.8%	12.3%	44.6
50 + hours	10.9%	73.7%	15.4%	56.4	23.2%	63.8%	13.0%	55.2
Hourly wage rate								
$0.01 - $7.50	1.6%	41.1%	57.3%	37.1	2.7%	41.7%	55.6%	29.8
$7.50 - $10.00	1.9%	51.8%	46.3%	39.0	3.3%	57.3%	39.4%	34.1
$10.00 - $15.00	4.2%	56.5%	39.3%	40.5	7.6%	64.9%	27.6%	34.6
$15.00 - $20.00	6.4%	69.4%	24.2%	41.1	10.9%	69.9%	19.2%	35.8
$20.00 - $25.00	6.0%	76.2%	17.8%	41.2	11.4%	75.1%	13.5%	35.4
> $25.00	10.1%	77.0%	12.9%	40.6	14.2%	74.6%	11.2%	34.0
Not stated / Refused	4.5%	74.8%	20.8%	41.2	6.8%	74.6%	18.6%	34.0
Union status								
Unionized	6.4%	71.4%	22.3%	39.8	10.3%	68.7%	21.3%	34.7
Non Unionized	4.7%	65.2%	30.1%	41.3	6.4%	63.9%	29.7%	33.9
Job permanency								
Permanent job	5.4%	69.7%	24.9%	41.1	7.9%	68.3%	23.8%	34.9
Non-permanent job	4.3%	47.2%	48.6%	37.1	4.7%	42.6%	52.7%	28.3
Pension plan								
Worker covered	6.3%	73.8%	20.0%	41.1	10.6%	71.7%	17.6%	36.5
Worker not covered	4.0%	59.0%	37.0%	40.3	4.5%	59.1%	36.5%	31.8
Industry								
Agriculture	2.8%	72.0%	25.3%	48.5	-	-	-	-
Forestry and mining	4.9%	75.9%	19.2%	44.6	-	-	-	-
Construction	2.4%	63.3%	34.3%	41.8	-	-	-	-
Agriculture, forestry, mining, construction	-	-	-	-	9.2%	77.1%	13.7%	35.9
Manufacturing	5.2%	71.9%	23.0%	41.1	8.4%	69.1%	22.5%	38.1
Distributive services	5.9%	66.9%	27.2%	41.7	8.1%	69.6%	22.3%	35.7
Business services	5.0%	67.6%	27.4%	40.5	8.6%	69.7%	21.7%	35.5
Consumer services	3.7%	57.7%	38.7%	39.0	3.4%	56.2%	40.4%	32.0
Public services	7.9%	70.7%	21.4%	39.4	9.3%	67.0%	23.6%	33.5
Firm size								
1 - 19 employees	4.1%	61.5%	34.4%	41.0	5.1%	64.6%	30.3%	32.3
20 - 99 employees	3.9%	67.1%	29.0%	41.6	6.1%	65.4%	28.5%	34.1
100 - 499 employees	6.1%	66.4%	27.6%	40.7	8.6%	65.4%	26.1%	34.9
500 + employees	6.4%	71.1%	22.5%	40.4	9.5%	66.6%	23.9%	35.0

Source: Survey of Work Arrangements, 1995

Note: Usual hours refers to the average usual hours worked in the main job.

Table 3: Preferences towards worktime and worker skills

Worker skills	Men				Women			
	Proportion desiring			Usual	Proportion desiring			Usual
	fewer	same	more	hours	fewer	same	more	hours
Total	5.3%	67.5%	27.2%	40.8	7.6%	65.5%	26.9%	34.2
Age								
15 - 24 years	0.9%	49.4%	49.8%	38.2	3.0%	47.4%	49.7%	33.1
25 - 34 years	4.0%	62.9%	33.1%	41.0	7.8%	63.4%	28.8%	34.6
35 - 44 years	6.7%	68.4%	24.9%	41.2	8.5%	67.0%	24.5%	34.4
45 - 54 years	6.6%	78.1%	15.3%	41.3	9.1%	71.5%	19.4%	34.5
55 years and over	6.9%	78.4%	14.7%	40.1	4.8%	79.0%	16.2%	32.8
Education								
Elementary school	2.5%	77.6%	19.9%	40.9	4.7%	69.2%	26.2%	33.9
High school (some or all)	4.1%	64.4%	31.5%	40.7	6.0%	65.3%	28.8%	33.4
Some post secondary	3.1%	61.6%	35.3%	39.7	8.7%	59.5%	31.8%	34.9
Post secondary diploma	5.2%	68.8%	26.0%	40.5	7.2%	66.4%	26.4%	33.9
University	9.7%	70.9%	19.5%	41.7	11.3%	66.6%	22.1%	36.2
Tenure								
1 - 6 months	1.9%	52.3%	45.9%	39.2	3.2%	44.3%	52.5%	29.5
7 - 12 months	3.1%	55.5%	41.5%	40.4	2.7%	59.0%	38.3%	33.4
1 - 5 years	4.8%	61.2%	34.0%	40.7	6.8%	61.5%	31.8%	34.0
6 - 11 years	5.8%	71.1%	23.1%	41.3	8.7%	70.7%	20.6%	35.2
11 - 20 years	7.1%	75.4%	17.5%	41.3	11.6%	74.2%	14.3%	35.8
Over 20 years	7.1%	83.3%	9.6%	40.9	9.0%	83.6%	7.4%	36.4
Occupation								
Professionals and managers	8.0%	75.3%	16.6%	43.2	10.1%	75.2%	14.8%	38.0
Natural and social science	8.8%	72.3%	19.0%	40.4	9.7%	67.1%	23.3%	34.0
Clerical	3.6%	60.9%	35.5%	37.7	7.8%	68.4%	23.8%	33.7
Sales	5.0%	60.9%	34.1%	40.4	5.2%	55.4%	39.4%	32.0
Services	2.7%	59.8%	37.5%	37.9	3.1%	52.9%	44.0%	31.0
Primary and processing	4.3%	69.5%	26.2%	41.3	6.4%	67.4%	26.2%	38.6
Construction	2.6%	63.9%	33.5%	40.8	-	-	-	-
Other	4.8%	64.4%	30.8%	40.9	-	-	-	-
Construction and other	-	-	-	-	4.4%	56.3%	39.4%	33.2

Source: Survey of Work Arrangements, 1995

Note: Usual hours refers to the average usual hours worked in the main job.

Table 4: Contingent workforce by age, 1995

Sample: Individuals aged 15-69, not enrolled as full-time students and in the labour force

Men	15-24	25-34	35-44	45-54	55 +	All
(1) Unemployed	17.1	9.1	7.7	6.4	7.0	8.7
(2) Involuntarily employed part-time	8.4	2.3	2.1	1.9	2.7	2.8
(3) Employed in a non-permanent job	10.0	6.9	4.7	3.8	4.2	5.6
(4) = (1) + (2) + (3)	35.5	18.3	14.5	12.1	13.9	17.1
(5) Employed but neither involuntarily employed part-time nor employed in a non-permanent job	64.5	81.7	85.5	87.9	86.1	82.9

Women	15-24	25-34	35-44	45-54	55 +	All
(1) Unemployed	14.2	9.3	7.6	6.5	6.5	8.5
(2) Involuntarily employed part-time	13.7	6.6	8.8	8.6	7.0	8.6
(3) Employed in a non-permanent job	10.8	7.9	5.5	4.0	4.9	6.4
(4) = (1) + (2) + (3)	38.7	23.8	21.9	19.1	18.4	23.5
(5) Employed but neither involuntarily employed part-time nor employed in a non-permanent job	61.3	76.2	78.2	80.9	81.6	76.6

Source: Survey of Work Arrangements, 1995
Note: Line (4) and (5) may not sum to 100.0 due to rounding.

Table 5: Preferences towards worktime and family characteristics

Family characteristics	Men				Women			
	Proportion desiring			Usual	Proportion desiring			Usual
	fewer	same	more	hours	fewer	same	more	hours
Total	5.3%	67.5%	27.2%	40.8	7.6%	65.5%	26.9%	34.2
Family earnings								
Under $20,000	0.7%	41.9%	57.4%	33.1	2.4%	47.4%	50.3%	28.1
$20,000 - < $30,000	3.6%	53.4%	43.0%	40.0	5.0%	70.0%	25.0%	35.6
$30,000 - < $40,000	5.4%	63.8%	30.9%	41.0	7.5%	65.8%	26.6%	35.7
$40,000 - < $50,000	4.3%	69.1%	26.6%	40.9	8.3%	64.2%	28.6%	34.7
$50,000 - < $60,000	6.4%	72.3%	21.3%	40.9	9.2%	65.1%	25.8%	34.5
$60,000 - < $70,000	5.0%	74.6%	20.4%	41.7	9.8%	68.4%	21.9%	36.4
Over $70,000	10.5%	72.6%	17.0%	42.7	15.6%	69.3%	15.1%	36.7
Marital status								
Married / Common-Law	6.0%	70.8%	23.1%	41.6	8.8%	68.4%	22.8%	33.7
Single, never married	2.8%	58.4%	38.8%	40.4	4.1%	55.8%	40.2%	36.0
Divorced, separated, widowed	7.3%	68.3%	24.4%	38.6	6.2%	66.7%	27.2%	35.0
Spouse weekly pay								
Single, separated, divorced, widowed	3.7%	60.3%	36.0%	39.0	4.8%	59.4%	35.9%	35.4
Spouse out of the labour force	5.5%	72.9%	21.6%	41.9	4.1%	64.5%	31.4%	33.6
Spouse unemployed	2.1%	62.3%	35.6%	40.8	8.4%	63.9%	27.7%	34.5
Spouse weekly wage: $0 - $249	3.0%	67.3%	29.8%	41.3	2.6%	50.1%	47.4%	32.6
Spouse weekly wage: $250 - $499	6.6%	67.5%	25.8%	41.0	5.2%	60.9%	34.0%	34.5
Spouse weekly wage: $500 - $749	5.9%	74.1%	20.0%	40.7	8.3%	67.6%	24.1%	34.2
Spouse weekly wage: $750 - $1000	12.7%	69.1%	18.2%	41.9	13.4%	66.1%	20.5%	33.4
Spouse weekly wage: $1000 & over	15.9%	65.4%	18.8%	42.4	13.6%	68.9%	17.4%	33.5
Refused / Not stated / Don't know	5.4%	73.8%	20.8%	42.3	7.7%	71.4%	20.9%	33.5
Preschool aged children								
No preschool aged children	5.4%	67.6%	27.0%	40.5	6.8%	65.6%	27.6%	34.7
1 preschool aged child	3.7%	67.1%	29.3%	41.5	11.0%	64.1%	25.0%	32.7
2 or more preschool aged children	6.5%	66.8%	26.7%	41.8	11.7%	67.1%	21.3%	30.9
Living arrangements and children								
Living alone & no preschool children	-	-	-		5.9%	64.2%	29.9%	36.5
Living alone & 1 preschool child	-	-	-		7.3%	53.9%	38.8%	33.8
Living alone & 2+ preschool children	-	-	-		..	..	..	..
Not living alone & no preschool children	-	-	-		7.1%	66.0%	26.9%	34.1
Not living alone & 1 preschool child	-	-	-		11.3%	65.1%	23.6%	32.6
Not living alone & 2+ preschool children	-	-	-		11.9%	70.0%	18.1%	31.0

Source: Survey of Work Arrangements, 1995

Note: Usual hours refers to the average usual hours worked in the main job.

Note: Family earnings is defined as the sum of wages and salaries for all paid workers in the household.

Note: Living alone is defined as (1) the respondent is the head of the household, (2) there is no spouse present and (3) the marital status is single, divorced, widowed or separated. Not living alone includes respondents that are married or living common law as well as respondents that are single, divorced, separated or widowed and living with other persons.

Note: .. number too small to report

Table 6: Probabilities of desiring fewer/same/more workhours by job characteristics

Job characteristics	Men			Women		
	Probability of desiring			Probability of desiring		
	fewer	same	more	fewer	same	more
Hourly wage rate						
$0.01 - $7.50	1.8%	55.8%	42.4%	2.3%	58.1%	39.1%
$7.50 - $10.00	2.8%	64.7%	32.6%	3.8%	65.3%	30.8%
$10.00 - $15.00	2.8%	64.7%	32.6%	4.8%	69.2%	26.0%
$15.00 - $20.00	4.3%	72.5%	23.1%	6.6%	73.2%	20.2%
$20.00 - $25.00	4.6%	73.6%	21.8%	7.5%	74.5%	17.9%
> $25.00	5.6%	75.8%	18.6%	8.9%	75.7%	15.3%
Not stated / Refused	4.5%	73.3%	22.1%	7.2%	74.2%	18.5%
Union status						
Unionized	Not statistically significant			Not statistically significant		
Non unionized						
Job permanency						
Permanent job	4.1%	71.8%	24.1%	5.8%	71.9%	22.0%
Non-permanent job	2.5%	62.7%	34.8%	2.8%	59.2%	38.0%
Pension plan						
Worker covered	4.1%	72.0%	23.9%	6.3%	72.8%	20.9%
Worker not covered	3.5%	69.5%	27.0%	4.6%	68.6%	26.7%
Industry						
Agriculture	4.4%	72.8%	22.8%	-	-	-
Forestry and mining	4.4%	72.8%	22.8%	-	-	-
Construction	4.4%	72.8%	22.8%	-	-	-
Agriculture/forestry/mining/ construction	-	-	-	9.7%	76.1%	14.2%
Manufacturing	4.4%	72.8%	22.8%	7.0%	73.8%	19.2%
Distributive services	3.9%	71.1%	25.0%	5.7%	71.5%	22.8%
Business services	3.5%	69.6%	26.9%	5.8%	71.7%	22.6%
Consumer services	3.5%	69.3%	27.2%	4.9%	69.5%	25.5%
Public services	3.4%	68.7%	27.9%	4.9%	69.5%	25.5%
Firm size						
1 - 19 employees	4.3%	72.8%	22.9%	6.1%	72.4%	21.4%
20 - 99 employees	3.7%	70.5%	25.7%	5.3%	70.5%	24.2%
100 - 499 employees	3.7%	70.5%	25.7%	5.3%	70.5%	24.2%
500 + employees	3.7%	70.5%	25.7%	5.3%	70.5%	24.2%

Source: Survey of Work Arrangements, 1995

Note: The calculations of probabilities depend on the statistically significant coefficients (at the 5% level of significance) and the mean value of the respective independent variables. The coefficients of the insignificant variables are set to zero. Please refer to Appendix II for further details.

Table 7: Probability of desiring fewer/same/more workhours and worker skills

Worker skills	Men			Women		
	Probability of desiring			Probability of desiring		
	fewer	same	more	fewer	same	more
	%	%	%	%	%	%
Age						
15 - 24 years	3.4	68.7	27.9	5.0	69.8	25.1
25 - 34 years	3.4	68.7	27.9	5.0	69.8	25.1
35 - 44 years	3.4	71.3	24.8	5.0	69.8	25.1
45 - 54 years	5.1	74.7	20.2	6.6	73.2	20.2
55 years and over	5.7	76.1	18.2	6.6	73.2	20.2
Education						
Elementary school	3.8	70.6	25.7	6.4	73.0	20.5
High school (some or all)	3.8	70.6	25.7	5.1	70.1	24.7
Some post secondary	3.2	67.5	29.3	5.1	70.1	24.7
Post secondary diploma	3.8	70.6	25.7	5.1	70.1	24.7
University	4.7	73.7	21.6	6.6	73.2	20.2
Tenure						
1 - 6 months	2.6	63.6	33.8	3.1	60.9	36.0
7 - 12 months	2.8	65.3	31.9	3.9	65.8	30.2
1 - 5 years	3.2	68.1	28.7	5.0	69.8	25.2
6 - 11 years	4.2	72.3	23.5	6.1	72.3	21.6
11 - 20 years	5.0	74.5	20.5	7.3	74.2	18.5
Over 20 years	5.5	75.7	18.9	8.0	75.0	16.9
Occupation						
Professionals and managers	5.0	74.5	20.4	6.9	73.7	19.4
Natural and social science	4.7	74.0	21.3	5.1	69.9	25.0
Clerical	2.9	66.2	30.8	6.1	72.3	21.6
Sales	3.6	70.0	26.3	4.6	68.4	26.9
Services	3.1	67.5	29.4	4.5	67.9	27.6
Primary and processing	3.6	70.0	26.3	6.1	72.3	21.6
Construction	3.6	70.0	26.3	-	-	-
Other	3.6	70.0	26.3	-	-	-
Construction and other	-	-	-	3.2	61.9	34.8

Source: Survey of Work Arrangements, 1995

Note: The calculation of probabilities depend on the statistically significant coefficients (at the 5% level of significance) and mean values of the respective independent variables. The coefficients of the insignificant variables are set to zero. Refer to Appendix II for further details.

Table 8: Probability of desiring fewer/same/more workhours and family characteristics

Family characteristics	Men			Women		
	Probability of desiring			Probability of desiring		
	fewer	same	more	fewer	same	more
	%	%	%	%	%	%
Spouse weekly pay						
Single, separated, divorced, widowed	3.7	70.2	26.1	3.9	65.7	30.4
Spouse out of the labour force	3.7	70.2	26.1	3.9	65.7	30.4
Spouse unemployed	2.5	63.0	34.5	3.9	65.7	30.4
Spouse weekly wage: $1 - $249	3.7	70.2	26.1	3.9	65.7	30.4
Spouse weekly wage: $250 - $499	4.2	72.2	23.6	5.0	69.8	25.2
Spouse weekly wage: $500 - $749	4.6	73.5	22.0	6.4	72.9	20.8
Spouse weekly wage: $750 - $1000	5.3	75.4	19.3	7.9	74.9	17.3
Spouse weekly wage: $1000 & over	5.2	75.2	19.6	8.2	75.2	16.6
Refused / Not stated / Don't know	3.7	70.2	26.1	6.0	72.1	21.9
Marital status	Not statistically significant			-	-	-
Married / common-Law				-	-	-
Single, never married				-	-	-
Divorced, separated, widowed				-	-	-
Preschool aged children	Not statistically significant			-	-	-
No preschool aged children				-	-	-
1 preschool aged child				-	-	-
2 or more preschool aged children				-	-	-
Living arrangements and children						
Living alone & no preschool children	-	-	-	3.6	64.3	32.0
Living alone & 1 preschool child	-	-	-	5.2	70.3	24.4
Living alone & 2+ preschool children	-	-	-	..	..	..
Not living alone & no preschool children	-	-	-	5.9	72.0	22.1
Not living alone & 1 preschool child	-	-	-	8.6	75.5	15.8
Not living alone & 2+ preschool children	-	-	-	9.8	76.1	14.0

Source: Survey of Work Arrangements, 1995

Note: .. number too small to report.

Note: The calculation of probabilities depends on the statisitcally significant coefficients (at the 5% level of significance) and the mean values of the respective independent variables. The coefficients of insignificant variables are set to zero. Please refer to Appendix II for further details.

Note: The probabilies for living arrangements and children are calculated as follows: for the group living alone, we set all the spouse weekly pay dummy variables to zero (since single, separated, divorced and widowed is the base category) and the appropriate living alone and number of children dummy variable to one. For the group not living alone, we set the dummy variable for spouse weekly pay of $500 - $750 to one and the appropriate not living alone and the number of children dummy variable to one.

Appendix I:

Comparison of the 1985 Survey on Work Reduction and the 1995 Survey of Work Arrangements

Previous Canadian studies on hours constraints (Benimadhu, 1987; Kahn and Lang, 1991, 1995, 1996) used data from the 1985 Survey on Work Reduction (SWR). Prior to the 1995 Survey on Work Arrangements (SWA), this was the only nationwide survey which asked Canadian workers whether or not they would like to work fewer or more hours at the **same hourly wage rate**. To fully appreciate the results of these studies, a detailed comparison of the two surveys is needed.

Contrary to the SWA, the SWR treats the desire to work more hours and the desire to work fewer hours asymmetrically. Specifically, workers are asked two questions about worktime reduction. One question examines whether employees would be willing to work fewer hours for less pay while the second question investigates whether individuals would reduce their workhours by trading part or all of their future pay increase for time off. On the other hand, only one question is asked regarding increases in workhours: respondents are asked if they would like to work more hours for more pay.[36] However, the SWR does not contain a question that evaluates an individual's willingness to offset all or some part of a potential pay decrease by working more hours.[37]

The two surveys differ in several other ways. First, the data from the SWR was collected using a mailout/mailback methodology. In contrast, the data from the SWA was collected through a computer-assisted telephone interview. Second, the SWR contained a detailed table which allowed the respondent to calculate how much income he/she would forego if he/she chose to

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[36] The three questions are the following :

Question 1. "In the next two years, would you take a cut in pay if you received more time off in return?

Yes ___

No ___ Why not ? Can't afford it ___

Like my hours now ___

Not possible in my job ___

other reason ___"

Question 3. "Another way to gain more time off is to trade all or some part of your pay increase. Would you trade some of your increase in the next two years for more time off? (For example, gain 5% more time off instead of a 5% pay raise?)

Yes ___

No ___"

Question 9. "If you continue to be paid at the same rate of pay that you are now, would you work more hours for more pay ?

Yes ___

No ___"

[37] Furthermore, in SWR, respondents could express interest in worktime reduction (i.e., answer yes to Question 1 or Question 3) and also state that they would work more time for more pay.

reduce his/her hours by, say, 2%. The SWA did not contain such a table. Combined, these two points suggest that the SWR respondents may have had more time (because the questionnaire was sent by mail instead of being administered through the phone) and more tools (because of the aforementioned table) to consider the implications of the various survey questions and to rank their preferences accordingly. Third, the SWA allowed for proxy respondents while SWR did not.[38] Allowing for proxy responses may be problematic when asking about preferences of another member of the household: the proxy respondent may not know the true preferences of this individual.[39] Fourth, contrary to the SWA, the SWR had both an introduction where respondents were told explicitly to assume that the hypothetical hours reduction would not affect their job security or job situation and a prologue which explained that the reason the survey was being conducted was to examine the possibility of reducing unemployment by having workers voluntarily reduce their hours of work. This may have led more respondents in the SWR to report that they wanted fewer hours than in the SWA.

Because of these differences in the wording and sequence of questions and in the data collection process, comparing how the desire to work fewer/more hours has evolved between 1985 and 1995 can be seriously misleading.

When interest in reduced worktime and interest in increased worktime are defined symmetrically, (i.e., by the proportion of workers who would work fewer hours for less pay and more hours for more pay, respectively), both Benimadhu (1987) and Kahn and Lang (1995) find that in 1985, more Canadians would work longer rather than shorter hours. Depending on the sample selected, they report that 32% to 34% of respondents preferred to work additional hours while 17% preferred a reduction in their workhours (Table A1).

When interest in reduced worktime is defined in a broader sense, (i.e., includes both employees who would reduce their hours through a pay cut and those who would do so by trading part or all of their future pay increase for time off), Benimadhu (1987) finds that 31% of the workforce are interested in shorter workhours. Thus, depending on whether one defines "interest in reduced worktime" in a narrow or broad sense, one ends up telling two different stories. In the first case, for each Canadian interested in reduced worktime, there are two Canadians who preferred longer hours. In the second case, interest in reduced worktime is almost as important as interest in increased worktime.

[38] In SWR, questionnaires were sent directly to the individuals selected in the sample and these individuals were asked to fill the questionnaire. However, it is possible that proxies could have completed the questionnaire but the SWR data set does not make that distinction.

[39] Fortunately, the SWA data set distinguishes answers obtained from proxy respondents from those who are not and thus allows us to take account of potential differences between proxy responses and non-proxy responses.

This latter comparison is likely to overestimate the relative importance of the desire for reduced hours due to the fact that interest in reduced worktime is then based on two questions (working less and : 1) accepting a pay cut, 2) not having a pay increase) while interest in more worktime is based on a single question. If interest in reduced worktime is broadly defined, then interest in increased worktime should also be broadly defined. That is, the interest in more workhours should include both workers willing to work more hours for more pay **as well as** workers willing to put in more hours to offset a potential pay decrease. Because the SWR does not contain a question on Canadians' attitudes in the advent of a potential pay cut, the only way to make a meaningful comparison of the interest in worktime reductions and in increases in worktime is to focus on the proportion of workers who would work fewer hours for less pay and more hours for more pay.

Table A1: Results from the Survey on Work Reduction of 1985

	(1) More hours for more pay	(2) Fewer hours for less pay	(3) Fewer hours either for less pay or by foregoing pay increase
	%	%	%
Benimadhu (1987)	32.1	17.3	30.7
Kahn and Lang (1995)	34.2	17.3	Not applicable

Appendix II: Regression Analysis

The results of the ordered logit model are used to calculate the probability of an individual desiring fewer/same/more workhours for a variety of demographic and job related characteristics. For a given characteristic (e.g. individuals aged 15-24), the probability of wanting fewer/same/more hours is calculated by setting the regressors (which are statistically significant at the 5% level) to their mean values. Coefficients of regressors which are not statistically significant are set equal to zero.

The following variables are used in the ordered logit model:

Group	Description	Variable Name	Sample Counts	
			Men	Women
Total			9932	9211
Age groups	15 - 24 years	da1524	1054	944
	25 - 34 years	Base	2816	2644
	35 - 44 years	da3544	3133	3070
	45 - 54 years	da4554	2122	1958
	55 years & over	da55	807	595
Education	Elementary school	dedele	616	295
	High school	dedhs	3578	3207
	Some post secondary	dedsps	760	764
	Post secondary degree	Base	3342	3355
	University	dedun	1636	1620
Job tenure	1 - 6 months	dten1m	1334	1361
	7 - 12 months	dten7m	769	543
	1 - 5 years	Base	2363	2497
	6 - 10 years	dten6y	1824	2141
	11 - 20 years	dten11y	2132	1850
	Over 20 years	dten20y	1510	819
Region	Atlantic	drega	1795	1734
	Quebec	dregq	1978	1677
	Ontario	Base	3219	2960
	Prairies	dregp	1281	1259
	Alberta	dregab	824	774
	British Columbia	dregbc	835	807
Family size	1 person	dfs1	1349	1092
	2 people	dfs2	2152	2480
	3 people	dfs3	2226	2096
	4 or more people	Base	4205	3543

Group	Description	Variable Name	Sample	Counts
Preschool children	0 children	Base	7811	n/a
	1 child	dnc1	1386	n/a
	2 or more children	dnc2	735	n/a
Union	Unionized	dunion	3865	3241
	Non-unionized	Base	6015	5937
	Unknown	dunionu	52	33
Job permanency	Permanent	Base	8848	8087
	Not permanent	dperm	1038	1073
	Unknown	dpermu	46	51
Pension plan	Covered	Base	5776	4676
	Not covered	dpension	4010	4423
	Unknown	dpensionu	146	112
Firm size	0 - 19 employees	dsize1	2055	2193
	20 - 99 employees	dsize2	1680	1398
	100 - 499 employees	dsize3	1720	1799
	500 & over	Base	4118	3582
	Unknown	dsize9	359	239
Living arrangements	Living alone no preschool children	dflag1	n/a	1708
	Living alone 1 child	dflag2	n/a	113
	Living alone 2 + children	dflag3	n/a	23
	Not living alone no preschool children	Base	n/a	5752
	Not living alone 1 child	dflag5	n/a	1096
	Living alone 2+ children	dflag6	n/a	519
Occupation	Professional	profman	1452	1333
	Natural & social science	natsoc	1327	2418
	Clerical	clerc	530	Base: 2517
	Sales	sales	632	736
	Services	services	934	1316
	Primary and processing	ppmw	Base: 2665	556
	Construction	oconst	1576	Group construction
	Other	other	1928	&other: 335

Group	Description	Variable Name	Sample	Counts
Industry	Agriculture	agri	179	Group: 298
	Forestry/mining	formin	512	
	Construction	const	716	
	Manufacturing	mfg	Base: 2415	894
	Distributive services	distserv	1783	660
	Business services	busserv	777	1121
	Consumer services	conserv	1576	2342
	Public services	pubserv	1928	3896
Spouse weekly pay	Single, divorced, widowed, separated	dspwk1	2615	2611
	Spouse unemployed	dspwk2	1630	107
	Spouse out of the labour force	dspwk3	292	57
	$1 - $249	dspwk4	856	109
	$250 - $499	dspwk5	1399	597
	$500 - $749	dspwk6	922	1091
	$750 - $999	dspwk7	390	900
	$1000 +	dspwk8	173	640
	Refused, not stated, don't know	dspwk9	1655	3099
Hourly wage rates	Refused, not stated, don't know	dhrpay0	2529	1783
	$0.01 - $7.50	dhrpay1	571	1389
	$7.50 - $10.00	dhrpay2	659	1029
	$10.00 - $15.00	dhrpay3	1886	2303
	$15.00 - $20.00	dhrpay4	1878	1480
	$20.00 - $20.00	dhrpay5	1378	751
	=> $25.00	dhrpay6	1031	476

Source: Survey of Work Arrangements, 1995

It can be shown that the probability of an event occurring is:

$$prob(more) = \frac{1}{1 + \exp(\beta_0 + \beta_1 * wage_i + \beta_2 * X_i + \beta_3 * F_i)}$$

$$prob(same) = \frac{1}{1 + \exp(-\mu_1 + \beta_0 + \beta_1 * wage_i + \beta_2 * X_i + \beta_3 * F_i)} - p(more)$$

$$prob(fewer) = 1 - \frac{1}{1 + \exp(-\mu_1 + \beta_0 + \beta_1 * wage_i + \beta_2 * X_i + \beta_3 * F_i)}$$

The likelihood function then becomes

$$L = \prod_i prob(more) \prod_j prob(same) \prod_k prob(fewer)$$

where the subscripts *i*, *j* and *k* refer to those desiring more, same and fewer workhours respectively.

The following tables present the results of the ordered logit model for men and women.

Results of Ordered Logit, Men aged 15 - 69, 9932 observations

Variable	Coefficient	Standard Error	z=b/s.e.	P[|Z|=z]	Mean of X
Constant	0.38379	0.09312	4.12200	0.00004	
DA1524	-0.12163	0.06401	-1.90000	0.05741	0.10960
DA3544	0.15942	0.04399	3.62400	0.00029	0.31060
DA4554	0.42377	0.06118	6.92700	0.00000	0.20290
DA55	0.55210	0.08488	6.50500	0.00000	0.00826
DEDELE	0.16164	0.10089	1.60200	0.10913	0.05382
DEDHS	-0.06536	0.04403	-1.48400	0.13772	0.36100
DEDSPS	-0.18263	0.07120	-2.56500	0.01032	0.08110
DEDUN	0.22505	0.05639	3.99100	0.00007	0.18310
DTEN1M	-0.23920	0.05723	-4.17900	0.00003	0.12770
DTEN7M	-0.15260	0.06252	-2.44100	0.01465	0.07992
DTEN6Y	0.26965	0.05161	5.22500	0.00000	0.19250
DTEN11Y	0.44460	0.05709	7.78800	0.00000	0.20560
DTEN20Y	0.55416	0.08258	6.71000	0.00000	0.13880
DREGA	0.04571	0.11927	0.38300	0.70155	0.07131
DREGQ	0.37211	0.04222	8.81400	0.00000	0.24750
DREGP	0.14304	0.11087	1.29000	0.19700	0.06398
DREGAB	0.13006	0.06888	1.88800	0.05901	0.09646
DREGBC	0.16243	0.05802	2.79900	0.00512	0.11940
DFS1	-0.01348	0.06061	-0.22200	0.82403	0.16670
DFS2	0.04593	0.04902	0.93700	0.34877	0.22200
DFS3	-0.00981	0.05004	-0.19600	0.84453	0.21880
DNC1	-0.11154	0.06466	-1.72500	0.08453	0.12780
DNC2	0.01017	0.08592	0.11800	0.90581	0.06393
DSIZE1	0.15625	0.05731	2.72600	0.00640	0.19620
DSIZE2	0.10508	0.05428	1.93600	0.05287	0.17550
DSIZE3	-0.02082	0.05057	-0.41200	0.68057	0.17330
DSIZE9	-0.05186	0.09042	-0.57400	0.56626	0.04346
DPERM	-0.51501	0.05814	-8.85800	0.00000	0.08994
DPERMU	-1.39840	0.27514	-5.08300	0.00000	0.00508
DUNION	-0.01404	0.04527	-0.31000	0.75647	0.36680
DUNIONU	-0.17163	0.19792	-0.86700	0.38585	0.00591
DPENSION	-0.16380	0.04656	-3.51800	0.00043	0.41630
DPENSIOU	-0.00261	0.14415	-0.01800	0.98556	0.01489
PROFMAN	0.32733	0.07069	4.63100	0.00000	0.15470
NATSOC	0.27712	0.07316	3.78800	0.00015	0.13940
CLERC	-0.22220	0.07770	-2.86000	0.00424	0.06263
SALES	-0.08903	0.07860	-1.13300	0.25733	0.06788
SERVICES	-0.15372	0.07212	-2.13100	0.03306	0.10020
OCONST	-0.19992	0.10527	-1.89900	0.05754	0.08402
OTHER	-0.01749	0.06431	-0.27200	0.78563	0.14290
AGR	0.36406	0.21001	1.73400	0.08300	0.01172
FORMIN	0.17286	0.12386	1.39600	0.16285	0.03446
CONST	-0.14372	0.10972	-1.31000	0.19023	0.07393
DISTSERV	-0.12325	0.05973	-2.06300	0.03909	0.17930
BUSERV	-0.21813	0.07069	-3.08600	0.00203	0.09432
CONSERV	-0.23359	0.06228	-3.75100	0.00018	0.16820
PUBSERV	-0.27022	0.06692	-4.03800	0.00005	0.17960
DHRPAY0	0.52983	0.05475	9.67700	0.00000	0.26580
DHRPAY1	-0.42212	0.08400	-5.02500	0.00000	0.05624
DHRPAY2	-0.08415	0.06976	-1.20600	0.22773	0.06941
DHRPAY4	0.47110	0.05774	8.15900	0.00000	0.18300
DHRPAY5	0.55063	0.06833	8.05800	0.00000	0.13550
DHRPAY6	0.74881	0.07782	9.62200	0.00000	0.11280
DSPWK2	0.09338	0.06877	1.35800	0.17446	0.13800
DSPWK3	-0.39768	0.12388	-3.21000	0.00133	0.02681
DSPWK4	-0.09822	0.08591	-1.14300	0.25293	0.07288
DSPWK5	0.13640	0.06623	2.05900	0.03946	0.12740
DSPWK6	0.22760	0.07759	2.93300	0.00335	0.09408
DSPWK7	0.39239	0.09765	4.01800	0.00006	0.03767
DSPWK8	0.37244	0.12706	2.93100	0.00338	0.01781
DSPWK9	0.11914	0.06265	1.90200	0.05721	0.16790
MU(1)	4.30580	0.04064	105.94400	0.00000	

Results of Ordered Logit, Women aged 15 - 69, 9211 observations

Variable	Coefficient	Standard Error	z=b/s.e.	P[|Z|=z]	Mean of X
Constant	0.32099	0.10367	3.09600	0.00196	
DA1524	-0.09770	0.06524	-1.49700	0.13428	0.11000
DA3544	0.08933	0.04907	1.82000	0.06871	0.33160
DA4554	0.28240	0.06194	4.55900	0.00001	0.21250
DA55	0.28199	0.09425	2.99200	0.00277	0.06413
DEDELE	0.24073	0.10825	2.22400	0.02616	0.03423
DEDHS	0.04414	0.04901	0.90100	0.36778	0.34910
DEDSPS	0.01414	0.06533	0.21600	0.82868	0.08668
DEDUN	0.26087	0.05414	4.81900	0.00000	0.19060
DFLAG1	-0.02774	0.08959	-0.31000	0.75683	0.19400
DFLAG2	0.37526	0.19015	1.97300	0.04844	0.01097
DFLAG3	-0.91109	0.45936	-1.98300	0.04732	0.00221
DFLAG5	0.40831	0.06629	6.15900	0.00000	0.11210
DFLAG6	0.55183	0.10188	5.41700	0.00000	0.04974
DTEN1M	-0.51187	0.05731	-8.93200	0.00000	0.13530
DTEN7M	-0.25212	0.08033	-3.13900	0.00170	0.06146
DTEN6Y	0.20176	0.05111	3.94700	0.00008	0.23400
DTEN11Y	0.39690	0.05790	6.85500	0.00000	0.18930
DTEN20Y	0.50164	0.09579	5.23700	0.00000	0.08975
DREGA	0.28260	0.12972	2.17900	0.02937	0.07287
DREGQ	0.46357	0.04305	10.76900	0.00000	0.23960
DREGP	0.24970	0.10953	2.28000	0.02262	0.06887
DREGAB	0.40993	0.06802	6.02700	0.00000	0.09787
DREGBC	0.28848	0.05954	4.84600	0.00000	0.12670
DFS1	0.38635	0.09376	4.12100	0.00004	0.11980
DFS2	0.17478	0.05315	3.28900	0.00101	0.28170
DFS3	0.02031	0.04920	0.41300	0.67980	0.23170
DSIZE1	0.15585	0.05561	2.80200	0.00507	0.22220
DSIZE2	0.04639	0.05753	0.80600	0.42008	0.14750
DSIZE3	0.01990	0.05021	0.39600	0.69185	0.19180
DSIZE9	-0.22143	0.09402	-2.35500	0.01852	0.03184
DPERM	-0.76188	0.05757	-13.23500	0.00000	0.10670
DPERMU	0.36635	0.27970	1.31000	0.19026	0.00563
DUNION	-0.07198	0.05046	-1.42700	0.15372	0.33080
DUNIONU	0.22391	0.30195	0.74200	0.45836	0.00344
DPENSION	-0.32182	0.04527	-7.10900	0.00000	0.47680
DPENSIOU	-0.36729	0.17605	-2.08600	0.03695	0.01388
PROFMAN	0.13529	0.06227	2.17300	0.02982	0.15780
NATSOC	-0.19029	0.06234	-3.05200	0.00227	0.24930
SALES	-0.29091	0.07300	-3.98500	0.00007	0.08559
SERVICES	-0.32393	0.06773	-4.78300	0.00000	0.12460
PPMW	-0.16076	0.09010	-1.78400	0.07438	0.06239
OTHER	-0.66297	0.09084	-7.29800	0.00000	0.04036
AFMC	0.72702	0.14206	5.11800	0.00000	0.02695
MFG	0.36466	0.07448	4.89600	0.00000	0.12100
DISTSERV	0.15004	0.07563	1.98400	0.04727	0.07978
BUSERV	0.16043	0.06548	2.45000	0.01428	0.14710
CONSERV	-0.05064	0.06765	-0.74900	0.45411	0.24020
DHRPAY0	0.43179	0.05815	7.42500	0.00000	0.21690
DHRPAY1	-0.60413	0.07693	-7.85400	0.00000	0.12460
DHRPAY2	-0.23715	0.06628	-3.57800	0.00035	0.10630
DHRPAY4	0.32653	0.05737	5.69100	0.00000	0.17030
DHRPAY5	0.47698	0.08135	5.86300	0.00000	0.07996
DHRPAY6	0.66131	0.09467	6.98600	0.00000	0.05789
DSPWK2	0.32448	0.18348	1.76900	0.07697	0.01258
DSPWK3	0.40349	0.28611	1.41000	0.15846	0.00506
DSPWK4	-0.29451	0.16177	-1.82100	0.06867	0.01146
DSPWK5	0.25674	0.09532	2.69400	0.00707	0.05726
DSPWK6	0.50749	0.08028	6.32100	0.00000	0.11330
DSPWK7	0.73556	0.08284	8.87900	0.00000	0.09573
DSPWK8	0.78129	0.08680	9.00100	0.00000	0.07359
DSPWK9	0.44273	0.06764	6.54600	0.00000	0.31710
MU(1)	4.02810	0.03800	105.99600	0.00000	

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